Regarding WT Docket No. 04-140, Amendment of Part 97 ....

Paragraphs 23, 24, and 25 refer to a change in Spread Spectrum regulations, proposing a change to allow SS emissions in the 222 MHz band, the 144 MHz band, and the 50 MHz band, in addition to all above 420 MHz. This should not be allowed, since the probability of mutual interference with existing stations is very great. For example, a 100 watt direct sequence spread spectrum signal, spread to 1 MHz wide, appears as a 1.5 watt noise transmission to ALL FM receivers in that 1 MHz (100 W * 15 kHz/1 MHz). 1 MHz corresponds to 32 NB FM channels, or 200 SSB or 2000 CW channels. It is strong enough to disrupt transmission from a portable at that same distance or any larger distance on ANY of the affected frequencies. This could be city-wide covering the whole band in some cases. Reciprocally, a 100 watt narrowband transmission at any frequency in the 1 MHz band of a DS-SS receiver is only rejected by 20 dB and acts like a 1 watt DS-SS interferer. DS-SS should only be allowed in bands where its emission spectrum is allowed. Since typically the signal is spread over 1 MHz or more, DS-SS should remain above 420 MHz. In cases where spreading is over a smaller band, there is low spreading gain anyway, and the communication can best be handled using other modes.

Frequency-hopping spread spectrum has a similar problem, but it can hop over frequencies in use and avoid interference if an auzilliary receiver is used and can determine the frequencies to avoid.

It seems best to leave the SS rules in their present form.

Thank you.
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